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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/834,141	04/12/2001	Brian Mitchell Bass	RAL920000016US2	1990
25299	7590	02/09/2006	EXAMINER	
IBM CORPORATION PO BOX 12195 DEPT YXSA, BLDG 002 RESEARCH TRIANGLE PARK, NC 27709			PHUNKULH, BOB A	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/834,141	<b>Applicant(s)</b> BASS ET AL.	
	<b>Examiner</b> Bob A. Phunkulh	<b>Art Unit</b> 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 and 17-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15, 26-28 is/are allowed.
- 6) ☒ Claim(s) 17-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Request for Continued Examination*

The request filed on 1/18/2006 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/834,141 is acceptable and a RCE has been established. An action on the RCE follows.

This communication is in response to applicant's 01/18/2006 amendment(s)/response(s) in the application of **BASS et al.** for "**METHOD AND SYSTEM FOR NETWORK PROCESSOR SCHEDULING BASED ON SERVICE LEVELS**" filed 02/12/1998. The amendments/response to the claims have been entered. No claims have been canceled. Claims 26-28 have been added. Claims 1-15, 17-28 are now pending.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 17-25 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The amended claimed subject matter “simultaneously” is not supported by the original specification.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17, 19 are rejected under 35 U.S.C. 102(b) as being anticipated by *Hughes et al.* (US 5835494), hereinafter *Hughes*.

Regarding claim 17, *Hughes* discloses a system for processing frames and enqueueing the frames on an output where the system accommodates flows with different types of service including combinations of different types of service, the system comprising:

a first calendar which supports a first service (virtual connections with faster transfer rates are scheduled using higher granularity calendars, see col. 3 lines 1-8);

a second calendar which supports a second service (virtual connections with slower transfer rates are scheduled using lower granularity calendars, see col. 3 lines 1-8);

logic which schedules frames onto the output from the first calendar and the second calendar, said logic including interaction between said first and second calendars to allow a single flow to be included on both calendars and to determine when the flow is enqueued on the output (a transmission control unit that uses a plurality of

Art Unit: 2616

calendars to schedule when each of the plurality of virtual connections will be serviced, see col. 3 lines 1-8).

Regarding claim 19, *Hughes* discloses a method of processing frames and placing the processed frames from a plurality of flows onto an output based upon different types of service levels associated with the flows, the steps of the method comprising:

establishing a first calendar to support a first type of service (virtual connections with faster transfer rates are scheduled using higher granularity calendars, see col. 3 lines 1-8);

establishing a second calendar to support a second type of service (virtual connections with slower transfer rates are scheduled using lower granularity calendars, col. 3 lines 1-8);

determining the types of service which have been selected for a given flow and using the types of service to select the calendars which service the flow (see col. 3 lines 25-33);

using the calendars to determine the order in which processed frames from the flows are placed onto the output (see col. 6 lines 52-67) ; and

allowing a single flow to be placed on the first and second calendar and serviced from both the first and second calendar by using logic to determine when a flow is serviced (see col. 7 lines 1-6).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Hughes* in view of *Calvignac et al.* (US 5946297), hereinafter *Calvignac*.

Regarding claim 18, 20, *Hughes* fails to explicitly the types of service include minimum bandwidth and best effort with a calendar to support each type of service and the step of determining the types of service include determining that a given flow has both minimum bandwidth and best effort and places the flow in both the calendar for minimum bandwidth and the calendar for best effort.

Regarding claim 21, *Hughes* fails to explicitly disclose the types of service include minimum bandwidth, best effort, peak and maximum burst size and the services include combinations of these types of service.

*Calvignac*, on the other hand, discloses the types of service include minimum bandwidth and best effort with a calendar to support each type of service and the step of determining the types of service include determining that a given flow has both minimum bandwidth and best effort and places the flow in both the calendar for minimum bandwidth (first scheduler guarantees up to the minimum band with, see col. 3

lines 50-53) and the calendar for best effort (second scheduler or complementary scheduling shares the remaining bandwidth, see col. 3 lines 50-67).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to includes the teaching of *Calvingnac* in the system taught by *Hughes* in order to provide a scheduling scheme for support of Minimum Service connections such as ABR connections, guaranteeing the minimum usable bandwidth to each connection and a fair share of the remaining bandwidth between these connections.

Claims 24-25, are rejected under 35 U.S.C. 103(a) as being unpatentable over *Pillar* in view of *Braff et al.* (US 5166930), hereinafter *Braff*.

Regarding claims 24-25, *Pillar* fails to disclose each connection queue includes  $n$  epochs where  $n > 1$  or  $n = 4$ .

*Braff*, on the other hand, discloses information identifying one or more data packets of each data batch is sorted into one or more of a plurality ( $N$ ) of epoch queues, such that for each data batch, no information identifying more than a predetermined number ( $P$ ) of data packets from a particular channel is inputted into each epoch queue, in a method of and apparatus for implementing a service scheduling discipline to enable data devices efficient access to data resources (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made replace the connection queue of *Pillar* with the epoch

Art Unit: 2616

queues of *Braff* for implementing a service scheduling discipline to enable data devices efficient access to data resources.

***Allowable Subject Matter***

Claims 1-15, 26-28 are allowed.

***Conclusion***

**Any response to this action should be mailed to:**

The following address mail to be delivered by the United States Postal Service (USPS) only:

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**or faxed to:**

(703) 872-9306, (for formal communications intended for entry)

**Or:**

The following address mail to be delivered by other delivery services (Federal Express (Fed Ex), UPS, DHL, Laser, Action, Purolater, Hand Delivery, etc.) as follow:

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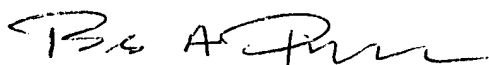


Art Unit: 2616

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Bob A. Phunkulh** whose telephone number is **(571) 272-3083**. The examiner can normally be reached on Monday-Tuesday from 8:00 A.M. to 5:00 P.M. (first week of the bi-week) and Monday-Friday (for second week of the bi-week).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor **Wellington Chin**, can be reach on **(571) 272-3134**. The fax phone number for this group is **(571) 273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Bob A. Phunkulh  
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TC 2600  
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February 6, 2006

**BOB PHUNKULH**  
**PRIMARY EXAMINER**